**9.1 Exploring Integer Addition**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Lesson Focus:** After this lesson, mathletes will be able to add and subtract integers using:

Pictures (and Diagrams)

·Objects (Integer Chips)

·Numbers (Yes! Numbers!)

**our chips textbook chips**

**POWER WORDS:**

* **zero pair:**

·a pair of integer chips, with one chip representing +1 and one chip representing -1

·the pair represents zero because (+1) + (-1) = 0

Example:

* **opposite integers:**

·two integers with the same "numeral", but different signs.

For example:

·two integers represented by points that are the same distance in opposite directions from zero on a number line like (-4) and (+4)

**Working Together:**

Example 1: Add Integers Using Integer Chips

Add using integer chips. Complete the addition statement in each case. Cross out or circle zero pairs where applicable. SHOW YOUR THINKING IN A DIAGRAM☺

a) (+1) + (+2) = \_\_\_ b) (-3) + (-2) = \_\_\_

c) (+5) + (-4) = \_\_\_ d) (-6) + (+2) = \_\_\_

**Example 2: Apply Integer Addition**

Renee spent $5 on bus fares to visit her aunt. During the visit, she gave Renee $12 for doing some yard work. How much money did Renee gain from the visit? Draw a diagram to show your thinking.

**TRY:**

1. **What is the sum of any two opposite integers? Give an example:**

**What addition statement does this diagram represent? What is the answer to the addition statement?**

**Use the sum of two integers to represent each statement:**

1. **Hailee found $10 in the crack of her couch while watching a movie. Then they decided to walk to the corner store and buy $4 of candy and other such junk food. How much did she have left?**
2. **One of Andrew’s hobbies is bug watching. He just loves how they move around. Last spring he watched a snail slide 7 cm down a stalk and clumb 5 cm back up. How far was the snail from its original position?**
3. **In the intense basketball tournament that Gordon and Mrs. Kidd officiated (remember the one where they was crying when you were losing and someone bit someones finger and someone almost got their nose picked and someone wanted to keep taking foul shots and then someone also got hit in the head with an elbow…yah – how can we ever forget that day!) one of the teams scored 2 points and the other team scored 6. How many points did the team win by?**
4. **Asher spent $120 on a penny board on Saturday morning and then $4 on a bracelet. How much less money did he have at the end of the day than at the beginning of the day? Use integer addition to determine your answer.**
5. **Taylor enjoys checking the temperature throughout the day. For a while she was carrying a thermometer with her everywhere she went. Three days ago she woke and it was -2 degrees outside, the temperature rose 8 degrees by noon. Then at 3:06 she noticed that the temperature had dropped by 3 degrees. What temperature was it at the end of the school day?**
6. **Write your own adding integer question:**